

8th Grade Review Questions (Chemistry)

Acids, Bases, and Salts

- Which substance is neutral?
 - Milk
 - HCl
 - Tums
 - Salt
- The chemical reaction between equally strong acids and bases is called
 - Neutralization
 - Emulsification
 - dissociation
 - ionization
- The pH of lemons would most likely be which of these
 - 7
 - 10
 - 4
 - 0
- Of the follow, which is the strongest base?
 - 10
 - 3
 - 7
 - 6
- Add the numbers on the pH scale AND label strong acids, strong bases, and neutral.



True or False

- _____ 6. Strong acids are good electrolytes.
- _____ 7. Seven on the pH scale is a strong acid.
- _____ 8. Acids and Bases mixed form salt and water.
- _____ 9. The pH scale measures whether a substance is an acid or a base.

Atoms

- According to the modern atomic theory, it is nearly impossible to determine an electron's exact
 - color
 - charge
 - position
 - mass
- What is an atom's nucleus made of?
 - protons and neutrons
 - only neutrons
 - only protons
 - protons and electrons
- The nucleus of the atom was first discovered by
 - Bohr
 - Rutherford
 - Dalton
 - Thomson

- ### Fill in the blank

Physical and Chemical Changes

- Physical and Chemical Changes
20. Which of the following is NOT an example of a physical change?
- a. the shaping of a gold bar
 - b. the explosion of fireworks
 - c. the melting of a Popsicle
 - d. the sanding of a piece of wood
21. Why are chemical properties harder to observe than physical properties?
- a. Chemical properties change the substance's identity.
 - b. Chemical properties depend on the size of the sample.
 - c. Physical properties can be observed and measured.
 - d. Physical properties change the identity of a substance.
22. What is the best way to tell if a chemical change has taken place?
- a. The matter changes color
 - b. A mixture separates into layers
 - c. The change is reversible
 - d. A composition changes

23. Which of the following is a chemical property of matter?

- a. solubility
- b. density
- c. volume
- d. reactivity

24. Melting crayons is an example of a

- a. physical property
- b. chemical property
- c. physical change
- d. chemical change

Periodic Table

Matching: Put the letter of the definition next to the correct answer. Each answer will only be used once.

- | | |
|---|------------------|
| _____ 25. Neutral subatomic particle | a. Periods |
| _____ 26. Number of protons and neutrons | b. Atomic Number |
| _____ 27. Horizontal rows on the periodic table | c. Symbol |
| _____ 28. Negative subatomic particles | d. Families |
| _____ 29. Represents an element | e. Valence |
| _____ 30. The electrons in the outermost energy level | f. Neutron |
| _____ 31. Number of protons in an element | g. Electron |
| _____ 32. Vertical columns on the periodic table | h. Mass Number |
| _____ 33. Positive subatomic particle | i. Proton |

Short Answer.

34. The periodic table is in order of this:

35. Elements in the same row/period have this in common:

36. Elements in the same column/group have this in common:

37. Name two properties of non-metals. Name two properties of metals.

Properties of Matter

Matching: Put the letter of the definition next to the correct answer. Each answer will only be used once.

- | | |
|--|--|
| _____ 38. Can be made into wire. | A. chemical property |
| _____ 39. Can be hammered into thin sheets | B. matter |
| _____ 40. Can be burned. | C. gas to liquid |
| _____ 41. Has mass and takes up space | D. physical properties |
| _____ 42.. Color, texture, shape | E. ductility |
| _____ 43. Boiling/evaporation | F. viscosity |
| _____ 44. Freezing | G. flammable |
| _____ 45. Condensation | H. liquid to solid |
| _____ 46. Melting | I. malleability |
| _____ 47. Phase change | J. solid to liquid |
| _____ 48. Rusting | K. caused by change in movement of atoms |
| _____ 49. Resistance to flow | L. liquid to gas |

Mixtures, Elements, and Compounds

50. Which of the following is an example of heterogeneous matter?
- | | |
|----------|----------|
| a. milk | b. salt |
| c. flour | d. salad |
51. When two or more substances are mixed together, but not chemically combined they form a
- | | |
|------------|-----------------|
| a. element | b. compound |
| c. mixture | d. phase change |
52. A solution is a
- | | |
|--------------------------|------------------------|
| a. type of compound | b. homogeneous mixture |
| c. heterogeneous mixture | d. type of molecule |

53. A solid solution that is a mixture of two metals is called a(n)

- a. compound
- b. molecule
- c. alloy
- d. sublimate

54. A substance that dissolves in water is

- a. soluble
- b. a colloid
- c. solvent
- d. insoluble

Fill in the Blank. Each term will only be used once.

Heterogeneous

Homogeneous

Solvent

Solute

Evenly

Solution

Bunched

Colloid

Universal

Compound

Soluble

Insoluble

_____ 55. The least-mixed of mixtures is _____.

_____ 56. The well-mixed of mixtures is _____.

_____ 57. The best-mixed of mixtures is _____.

_____ 58. Milk is an example of a _____.

_____ 59. Particles in a solution are spread _____.

_____ 60. Water is called the _____ solvent.

Compounds and Elements

61. Al, Cu, N, and O are symbols for

- a. compounds
- b. mixtures
- c. elements
- d. molecules

62. A substance that is made of atoms that are all the same is called

- a. compounds
- b. mixtures
- c. elements
- d. molecules

63. According to the formula for ammonia (NH_3), how many atoms of nitrogen and how many atoms of hydrogen are there?

- a. One nitrogen, one hydrogen
- b. One nitrogen, three hydrogen
- c. Three nitrogen, one hydrogen
- d. Three nitrogen, three hydrogen

64. What is the name of the small number that tells the number of atoms?

- a. subscript
- b. reaction
- c. coefficient
- d. yields

65. A chemical equation is balanced by adding this
- a. subscript
 - b. reaction
 - c. coefficient
 - d. yields

66. A chemical equation shows that a _____ has occurred.
- a. phase change
 - b. chemical reaction
 - c. size change
 - d. loss

Count these Atoms

_____ 67. NaOH_2

_____ 68. $\text{CNa}(\text{HO}_2)_2$

Balance this equation.

